REMARKS

Claims 2-15, 17 and 19-24 are pending in this application. In the Office Action dated September 22, 2004, Claims 2, 3, 17, 19-21 and 23 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. 6,409,332 to Yraceburu *et al.* ("Yraceburu"), Claims 4-15 were rejected under 35 U.S.C. § 103 as being obvious over Yraceburu, and Claims 23 and 24 were rejected as being obvious over Yraceburu in combination with U.S. 5,806,992 to Ju ("Ju").

The present application contains two independent claims, independent apparatus Claim 21 and independent method Claim 23, and nineteen dependent claims. Dependent Claims 2-15 and 22 depend, directly or indirectly, from apparatus Claim 21. Dependent Claims 17, 19, 20 and 24 depend, directly or indirectly, from method Claim 23. Independent Claims 21 and 23 have been amended to specify that the top surface of the vacuum table has a plurality of "substantially regular" holes extending through the top surface and in fluid communication with a vacuum source located within the vacuum table. Support for these amendments can be found in the Specification at, for instance, page 6, lines 6-7, and Fig. 2A.

On page 6 of the present Office Action, the Examiner attempts to rebut the applicants' arguments for the patentability of independent Claims 21 and 23, made in the Amendment filed on June 17, 2004, by proposing a number of alternative ways in which the claimed invention allegedly reads upon the apparatus and method described in the Yraceburu reference. However, with the entry of the present amendments, it is clear that independent Claims 21 and 23 cannot even arguably read on the Yraceburu reference. Moreover, because when properly construed, neither Claim 21 nor Claim 23 is taught or suggested by the prior art, the Examiner's § 102 and § 103 references are overcome, and all of the present claims should be allowed.

Interpretation #1: Layer 323 of Lid-Filter 317 as the Claimed "Substantially Flat Top Surface" of the Vacuum Table

Independent apparatus Claim 21 recites an apparatus for transporting a substrate through a printing system, which comprises (1) "a vacuum table having a substantially flat top surface for supporting a substrate, where the top surface of the vacuum table has a plurality of substantially

regular holes extending through the top surface and in fluid communication with a vacuum source located within the vacuum table," (2) "a thin, substantially flat porous sheet over the top surface of the vacuum table," and (3) "a moveable transport belt for moving a substrate over the top surface of the vacuum table, the transport belt being disposed over the porous sheet." In addition, the transport belt has a "plurality of holes extending through a thickness of the belt; the vacuum generated by the vacuum table creating a suction on a substrate placed on the transport belt, the porous sheet restricting fluid flow between the table and the transport belt." Substantially identical limitations are recited in independent Claim 23.

In the Office Action dated September 22, 2003, the Examiner argues that "the layer 323 of lid-filter 317 [of] Yraceburu is seen to read on the claimed top of the vacuum table." As discussed in previous amendments filed in this case, the "lid filter" structure 317 of Yraceburu is located inside a larger vacuum platen system 301. The "lid filter" 317 is comprised of "filter material" and is "essentially an air-flow filter" which physically separates the lower vacuum chamber and the upper platen portion of the vacuum platen system. (See Yraceburu at col. 5, lines 4-59, col. 6, lines 6-14). As discussed at col. 6, lines 6-14, and shown in Fig. 3 of Yraceburu, the layer 323 of the lid-filter (which the Examiner believes is the "top surface" of the present claims), is a "relatively dense" layer of "fine" filter material that traps debris from entering the vacuum box.

Applicants respectfully disagree that this "dense" layer 323 of "fine" filter material disclosed in Yraceburu could meet the limitation of a "substantially flat top surface [of a vacuum table] for supporting a substrate" as recited in independent Claims 21 and 23. However, even if one skilled in the art were tempted to adopt this strained interpretation, the present amendments to Claims 21 and 23 completely foreclose this possibility. Specifically, Claims 21 and 23 have been amended to state that "the top surface of the vacuum table has a plurality of *substantially regular* holes extending through the top surface." (Emphasis added). Yraceburu teaches that layer 323 is a densely-packed layer made up of "fine" filter material. It is not a "top surface" of a vacuum table having a plurality of "substantially regular holes extending through the top surface." On the contrary, Yraceburu explicitly teaches that the "fine" filter material is packed densely, and thus would not have substantially regular holes extending through the layer. To the extent that this layer 323 permits fluid communication with a vacuum source located within the

vacuum table, it would be through the dense and irregularly packed "fine" filter material, and not through a plurality of substantially regular holes, as is presently recited. Accordingly, it cannot be the case that layer 323 satisfies the limitation of the "top surface" of the vacuum table, as presently claimed.

Interpretation #2: Entire Lid-Filter 317 as the Claimed "Substantially Flat Top Surface"

The Examiner also contends that, in the alternative, "the entire lid-filter 317 reads on the top of the vacuum table." However, this interpretation is still deficient in that the lid-filter 317 cannot meet the limitation of "a top surface of [a] vacuum table [having] a plurality of *substantially regular* holes extending through the top surface." As previously discussed, the lid-filter 317 consists of two layers of "filter materials": a relatively porous layer of coarse material 318, and a relatively dense layer of fine material 323. This irregularly-packed filter material, which makes up the lid-filter 317, cannot meet the limitation of a top surface of a vacuum table having *substantially regular* holes extending through the surface. Accordingly, this interpretation is also incorrect.

Interpretation #3: Upper-Layer 318 as the Claimed "Thin, Substantially Flat Porous Sheet"

The Examiner also argues that the "upper layer 318" of Yraceburu's lid-filter 317 can satisfy the limitation of "a thin, substantially flat porous sheet over the top surface of the vacuum table," as recited in independent Claims 21 and 23. Applicants strongly disagree with the Examiner's assessment that the relatively porous layer of coarse "filter material" 318 disclosed by Yraceburu satisfies the limitation of a "*thin, substantially flat porous sheet*," as presently recited.

Nevertheless, even if one assumes that the Examiner's interpretation is correct, Yraceburu still does not anticipate Claims 21 or 23, since the Examiner cannot show that this purported "flat porous sheet" is over the "top surface of the vacuum table," as presently recited. In other words, if the upper layer 318 of the lid-filter 317 is the claimed "porous sheet," than where is the claimed "top surface" of the vacuum table, having "a plurality of *substantially regular* holes extending through the top surface"? As previously discussed, the lower layer 323

of the lid-filter, which is made of densely-packed fine filter material, *cannot* be the presently-recited "top surface." Thus, this proposed interpretation is also incorrect.

Interpretation #4: Platen 311 as the Claimed "Thin, Substantially Flat Porous Sheet"

Finally, the Examiner proposes that the "platen 311 is in the form of a relatively thin sheet and reads on the porous sheet." Applicants contend that one of ordinary skill in the art could not possibly find the platen 311 structure of Yraceburu to satisfy the limitation of "a thin, substantially flat porous sheet over the top surface of the vacuum table," as recited in Claims 21 and 23. As readily apparent from Fig. 3 of Yraceburu, the platen 311 has a substantial thickness, with an array of vacuum ports 315 extending through the platen to the lid filter. The platen is designed to support the substrate for printing operations, and is thus more analogous to the presently-recited top surface of the vacuum table. The platen 311 is not "thin," nor is it what would conventionally be understood as a "sheet."

Nevertheless, even if one were to adopt this tortured interpretation of a "thin, substantially flat porous sheet," Yraceburu still cannot anticipate, since the Examiner cannot show the requisite "top surface of the vacuum table [having] a plurality of *substantially regular* holes extending through the top surface," which, according to Claims 21 and 23, must be located under the porous sheet. For the reasons discussed above, Yraceburu has no element beneath the platen 311 that could be considered the present "top surface" of the vacuum table. Accordingly, this proposed interpretation is also incorrect.

In view of the above remarks, it is clear that the Examiner's § 102 rejections of independent Claims 21 and 23 are overcome. As recited in the present claims, the present invention utilizes a thin, substantially flat porous sheet that is disposed over the substantially flat top surface of the vacuum table, and over the plurality of substantially regular holes extending through the top surface of the vacuum table and in fluid communication with a vacuum source located inside the table. A moveable transport belt having holes extending through the belt is disposed over the porous sheet, such that the vacuum generated by the vacuum table creates a suction on a substrate transported by the belt, and the porous sheet restricts fluid flow between the vacuum table and the transport belt, thus maintaining a substantially continuous vacuum,

even as the area of the vacuum table covered by the substrate varies. The presently claimed invention is substantially different from the "vacuum platen system" of Yraceburu. Significantly, the present invention utilizes a thin, substantially flat porous sheet which is disposed over the substantially flat top surface of the vacuum table, as opposed to a complicated internal "lid filter" element of Yraceburu, which is comprised of layered or graduated "filter material," and which physically separates an upper platen portion from the lower vacuum-box. By using a thin porous sheet over the top surface of the vacuum table and beneath the movable transport belt, the present invention represents an inexpensive and easily implemented technique for restricting air-flow and providing an essentially constant vacuum over various sizes and types of substrates. Moreover, since the sheet is disposed over the top surface of the vacuum table, it can easily be replaced when worn, or when a different level of flow restriction is desired.

Since the features of new independent Claims 21 and 23 are not taught or suggested by the cited Yraceburu reference, nor are these features taught or suggested by any of the prior art of record in this case, it is respectfully submitted that these claims and their dependents, Claims 2-15, 17, 19, 20, 22 and 24, should all be allowed.

CONCLUSION

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

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